WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

edge-extracting means for extracting edges of an input image composed of pixels in a matrix;

period-detecting means for detecting the periods of the edges;

dividing means for dividing the input image into blocks according to the periods of the edges; and

pixel-value converting means for converting the pixel values of all pixels in each of the blocks to a predetermined pixel value.

2. The image processing apparatus according to claim 1, further comprising:

frequency-detecting means for detecting the frequencies of pixels belonging to the edges extracted by the edge-extracting means in each of the horizontal and vertical directions of the matrix,

wherein the period-detecting means detects the periods of the edges in each of the horizontal and vertical directions of the matrix based on the frequencies of the pixels.

3. The image processing apparatus according to claim 1,

further comprising:

discrete Fourier transforming means for applying a discrete Fourier transform to the frequencies of the pixels belonging to the edges in each of the horizontal and vertical directions to produce respective power spectra; and

peak-detecting means for detecting the spatial frequency at the peak in each of the power spectra,

wherein the period-detecting means detects the periods of the edges based on the spatial frequencies at the peaks.

4. A method for processing an image, the method comprising:

an edge-extracting step of extracting edges of an input image composed of pixels in a matrix;

a period-detecting step of detecting the periods of the edges;

a dividing step of dividing the input image into blocks according to the periods of the edges; and

a pixel-value converting step of converting the pixel values of all pixels in each of the blocks to a predetermined pixel value.

5. A recording medium containing a computer-readable program, the program comprising:

an edge-extracting step of extracting edges of an input

image composed of pixels in a matrix;

a period-detecting step of detecting the periods of the edges;

a dividing step of dividing the input image into blocks according to the periods of the edges; and

a pixel-value converting step of converting the pixel values of all pixels in each of the blocks to a predetermined pixel value.

6.   A computer-readable program comprising code to execute a method comprising:

an edge-extracting step of extracting edges of an input image composed of pixels in a matrix;

a period-detecting step of detecting the periods of the edges;

a dividing step of dividing the input image into blocks according to the periods of the edges; and

a pixel-value converting step of converting the pixel values of all pixels in each of the blocks to a predetermined pixel value.